



# ***Forest Roads Good and Poor Characteristics***

Properly planned, designed, constructed, and maintained roads are essential to enlightened forest management and protection. Well-built roads are an asset to the landowner and operator, are easy to maintain, and have short periods of restricted use. THE GOAL OF THE ROAD CONSTRUCTION AND MAINTENANCE RULES OF THE IDAHO FOREST PRACTICES ACT IS TO INSURE THAT ROADS DO NOT WASH OUT, DO NOT DISCHARGE SEDIMENT INTO STREAMS, AND WILL NOT HARM WATER QUALITY.

## Good Road Characteristics

## Poor Road Characteristics

### ***PLANS AND ROAD STANDARDS***

Width and grades are suitable for needs and intended uses. Cost allowances are carefully analyzed (a 14-foot road costs about 33 percent more than a 12-foot road). Grades of 2% to 10% are least costly to drain and can be used throughout the year. Plan road layout to fit the natural terrain features so that width, cuts, and fills are minimized.

Excessive width can result in excessive costs; large fill slopes require more drainage and more surface area to stabilize. Flat grades can form mud holes by pooling water, whereas steep (10%+) grades accelerate water runoff velocity and gulying. Steep grades may require the use of chains and towing vehicles during wet weather or winter conditions.

### ***LOCATION***

Roads are on stable landforms and gentle slopes outside the Stream Protection Zones (SPZs), entering the SPZ only for approaches to stream crossings. Greater amounts of vegetation are left undisturbed to dissipate and filter water.

Roads built in the Stream Protection Zones (SPZs), and fills may erode into streams; road beds are frequently on soft, wetter ground; and excessive SPZ vegetation removed. Roads located on steep, unstable slopes or landforms are subject to mass wasting.

# **FOREST ROADS GOOD AND POOR CHARACTERISTICS**

## Good Road Characteristics

## Poor Road Characteristics

### ***DRAINAGE***

The drainage plan has every running foot of the road under a combination of:

- a) Inslope and inside ditch, frequent cross-drains.
- b) Outsloped drainage onto stabilized fills or filter strips of ground cover and vegetation.
- c) A planned mix of insloped, outsloped, crowned, or bermed fill sections with matching water distribution off the road.
- d) Surfaces of cuts, fills, berms, and roads are stabilized by grass, mulch, or fabric.
- e) All muddy water off the road is dissipated and filtered and cleaned by undisturbed vegetation and slash filter windrows before reaching Class I or II streams.

No thoughtful drainage system apparent.

Mudholes, rills, gullies, washouts, and slumps occur on cuts and fills; muddy water reaches Class I and II streams. Inside ditches deliver directly to streams at crossings. Cuts and fills for switchbacks are in draws or creek bottoms. They are not stabilized by heavy grass seedings, mulching, erosion fabric, slash filter windrows, or combinations of these techniques. Drainage systems for inactive roads are not maintained. Drainage systems for abandoned roads are not put to bed, culverts not pulled, and the road is not closed to vehicles.

### ***CULVERT CROSS DRAINS***

Adequately located, sized, installed and maintained, metal or plastic relief culverts are spaced under the road to disperse inside ditch, springs, seepage, and other water flows. They are sloped, tamped, and bedded firmly, and covered sufficiently. The inlets are armored with rock and constructed to remain unplugged. The outlet is armored or down-spouted to protect fills or extend beyond the toe of the fillslope.

No cross drainage is provided for inside ditches, road surface water, or water from springs and seeps. Culverts are too small, or infrequent, and made of logs or debris. The inlets will be plugged by cut bank sloughing, maintenance grading, or debris. There are no culverts for intermittent streams.

### ***CROSS DITCHES/ROLLING DIPS***

On infrequently used roads, cross ditches are installed after each use, spaced properly (see State Forester Forum on Cross-Ditches), stabilized, and maintained. For frequently used roads, rolling dips are permanently built into the road surface; with gradients less than 8 percent.

Cross ditches or rolling dips are not installed, or if installed, are not installed or located properly or maintained and are road protection failures.

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### ***FILTER WINDROWS***

Filter windrows are used. They are structured sediment barriers at the toe of fillslopes made of slash and other woody debris (see State Forester Forum No. 13, "Slash Filter Windrows"). These trap 75 to 85+ percent of unstabilized fillslope erosion in or near SPZs.

Filter Windrows not used or not properly constructed.

### ***MUD AND DUST***

Where natural rock is lacking and soils easily turn into mud or dust, 3-inch minus-sized rock surface is applied at least 10 inches deep.

Mud or dust cause operations and safety problems. Rock surface is lacking.

### ***GRADES IN CURVES***

Road grades on sharp curves are reduced to 7% or less. Grades are ad versed at stream crossings. Road junctions and truck turnarounds are not built in or at stream crossings or in SPZs.

Grades over 7% are sustained in sharp curves on switchbacks and at stream crossings. Road junctions and truck turnarounds are built at stream crossings and in SPZs.

### ***INACTIVE OR ABANDONED ROADS***

Inactive Roads: All drainage systems and structures are cleaned, stabilized, and maintained annually to prevent erosion. Access is controlled where seasonal traffic is allowed.

Abandoned Roads: They are left in a stabilized condition with all stream crossings removed, except under deliberate landowner choice. Permanently are closed to vehicular traffic.

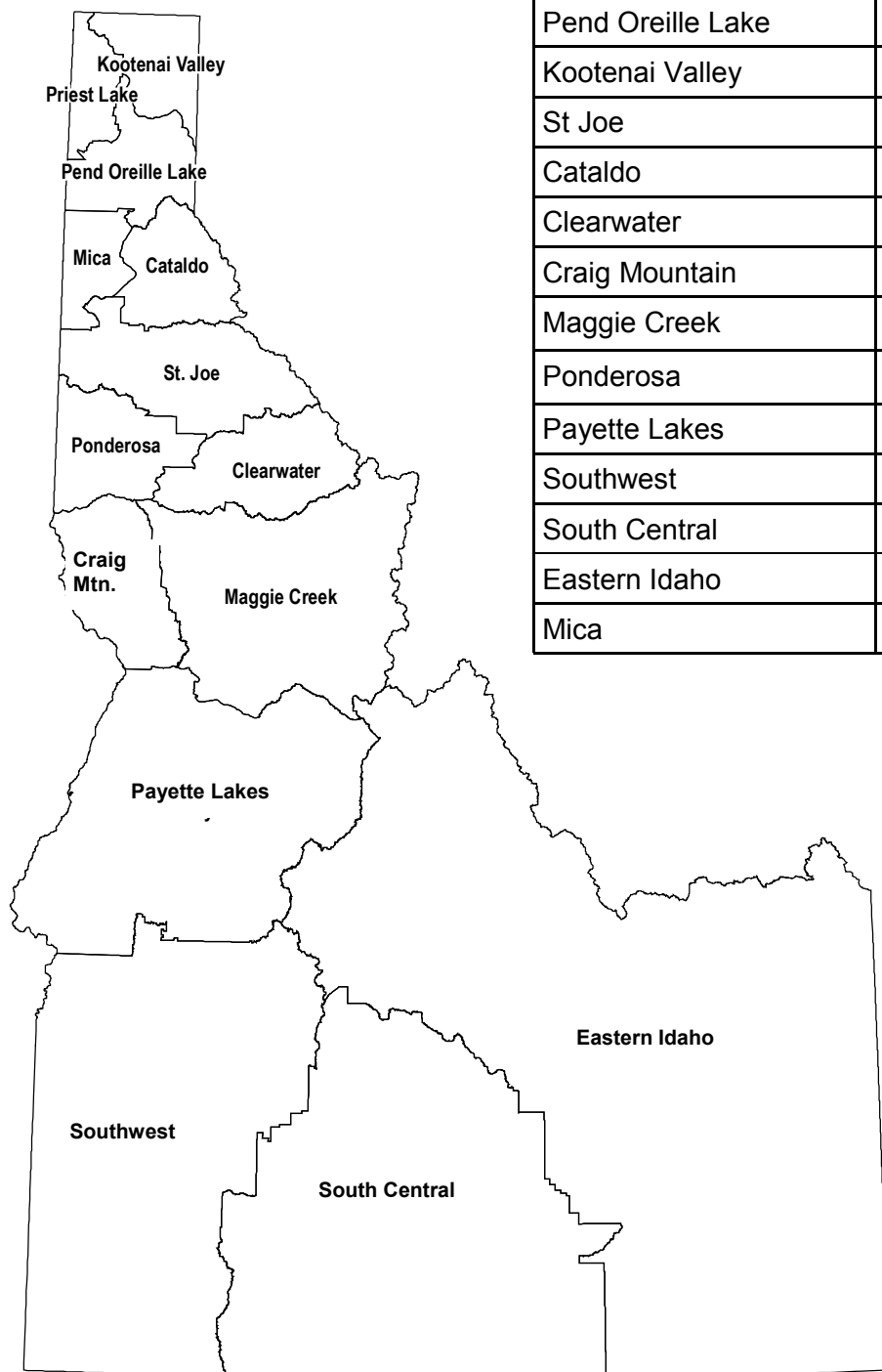
Inactive Roads: No post operation stabilization and drainage cleanout done. No planned regular or annual maintenance done.

Abandoned Roads: No final or post operation stabilization and drainage cleanout done. No permanent road closure structures or barriers made.

On-the-ground help or written material on Forest Roads and Water Quality is available from your nearest Idaho Department of Lands Forest Practices Advisor.



**FOR MORE INFORMATION CONTACT  
ANY IDAHO DEPARTMENT OF LANDS  
FOREST PRACTICES ADVISOR**



Area Office	Location	Phone
Priest Lake	Coolin	(208) 443-2516
Pend Oreille Lake	Sandpoint	(208) 263-5104
Kootenai Valley	Bonn timers Ferry	(208) 267-5577
St Joe	St Maries	(208) 245-4551
Cataldo	Kingston	(208) 682-4611
Clearwater	Orofino	(208) 467-4587
Craig Mountain	Craigmont	(208) 924-5571
Maggie Creek	Kamiah	(208) 935-2141
Ponderosa	Deary	(208) 877-1121
Payette Lakes	McCall	(208) 634-7125
Southwest	Boise	(208) 334-3488
South Central	Jerome	(208) 324-2561
Eastern Idaho	Idaho Falls	(208) 525-7167
Mica	Coeur d'Alene	(208) 769-1577